UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO .: 8.049.691 Page 1 of 3

APPLICATION NO.: 10/676,312 ISSUE DATE: November 1, 2011 INVENTOR(S): Hao Pan

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Col. 9, Line 22

Change " $d_n(t) = f_d(T; Z_n, Z_{n-1}, Z_{n-2}, \dots, Z_{n-n+1}, Z_{n-n}) 0 \le t < 1$ "

to read: $-d_n(t) = f_d(T; Z_n, Z_{n-1}, Z_{n-2}, \dots, Z_{n-n+1}, Z_{n-n}) 0 \le t < 1-$

Col. 9, Line 45

Change: " $d_{\pi}(t) = z_n = x_n$ for $t' \le t < 1$ "

to read: $-d_{-}(t) = z_{-} = x_{-}$ for $t' \le t < -$:

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Kevin L. Russell

Chernoff, Vilhauer, McClung & Stenzel

601 SW Second Ave., Suite 1600

Portland, OR 97204

his collection of information is required by 37 CFR 1,322, 1,323, and 1,324. This information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) on application. Confidentiality is governed by 30 VSC 122 and 37 CPR 14. This collection is estimated in table 10 hour in conceils. Including gathering, preparing, and submitting the composition application from the USPTO has proceed by 30 VSC 122 and 37 CPR 14. This collection is estimated in table 10 hour in connection, including gathering, preparing, and submitting the composition application from the temporary for the view of the process of the process of the collection is estimated to take 10 hour in connection to the amount of time you mount to comprehe this form and over equipment of the view of the submitting to the process of the view of the v Department of Commercia, P.O. Box 1958, Alexandria, VA 22313-1956, DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1458, Alexandria, VA 22313-1436.

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO.: 8,049,691 Page 2 of 3

APPLICATION NO.: 10/676,312
ISSUE DATE: November 1, 2011

INVENTOR(S): Hao Pan

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Col. 9, Line 48

Change " $z_{n+1} = z_n$, $d_{n+1}(t) = z_n = x_n$ for $0 \le t < 1$ "

to read: $-z_{n+1} = z_n, d_{n+1}(t) = z_n = x_n \text{ for } 0 \le t < 1$ --;

Col. 9, Line 54

Change: " $d_{n+1}(t) = f_d(t; z_{n+1}, x_n) 0 \le t < 1$ "

to read: $-d_{n+1}(t) = f_n(t; z_{n+1}, x_n) 0 \le t < 1$ -

Col. 11, Line 39

Change: " $z_n = f_n(x_n, d_{n-1})$ "

To read: $-z_n = f_s(x_n, d_{n-1})$ --

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Kevin L. Russell Chernoff, Vilhauer, McClung & Stenzel

601 SW Second Ave., Suite 1600 Portland OR 97204

The collection of elementation is merganed by 37 CFR 1.22.4 3.22, and 1.32.5 The intermation is exceeded to obtain or estain is sherred by the potice which is to fife code by the SFFT to perceive an application. Confederable by its growned by 51.5.0.5 (22 and 37.5 FR.1.1 This collection is estimated to the last of bloom of confederable, concurring pathways proparing and submitting the completed application form to the LEFFT. There six vary deporting on the medivation case, this comments on this amount of these overviews to comment of the completed application form to the LEFFT. There six vary deporting on the medivation case, in the comments on the connected of the comments of the complete and the control of the connected of the comments of the LEFFT. See that was also control of the connected of Commence (P.O. Box 1450, Alexandrica VA 22313-450, DO SPI SERIO TELES OF COMPLETED FORMS TO THIS ADDRESS. SEND TO. Attention of confirmation of Commence (P.O. Box 1450, Alexandrica VA 22313-450).

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid ONB control number
(Also Form PTC-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO.: 8.049.691 Page 3 of 3

APPLICATION NO.: 10/676,312 ISSUE DATE: November 1, 2011

INVENTOR(S): Hao Pan

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Col. 14. Line 53

Change " $d_n(t) = f_d(t; Z_n, Z_{n-1}, Z_{n-2}, \dots, Z_{n-p+1}, Z_{n-p}) 0 \le t < 1$ "

to read: $-d_n(t) = f_0(t; Z_n, Z_{n-1}, Z_{n-2}, \dots, Z_{n-n+1}, Z_{n-n}) 0 \le t < 1-$

Col. 14, Lines 62-63

After the equation, remove the "."

Col. 15, line 61

Change "If z" to read -- If z, --:

Col. 15, Line 63

Change "N." to read -- N" --.

Col. 16, Line 13

Change "sum_n "in $(i) = (d_n(i) - x_n)^2$ " to read $- sum_n = (d_n(i) - x_n)^2 - d_n(i)$

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Kevin L. Russell

Chernoff, Vilhauer, McClung & Stenzel

601 SW Second Ave., Suite 1600

Portland, OR 97204

This collection of information is replaced by 37 CPR 1.02 £ 1.023, and 1.024. This information is regulate to debtine or relates to behind by the public which is to bill cent to pure 1.024 f 1.024 f